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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,661	05/25/2007	Igor Jermolajev	88215-715441 (000900US)	4564

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EXAMINER
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ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1722

NOTIFICATION DATE	DELIVERY MODE
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07/12/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docket@kilpatricktownsend.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/597,661	<b>Applicant(s)</b> JERMOLAJEV, IGOR
	<b>Examiner</b> MARTIN ANGEBRANDT	<b>Art Unit</b> 1722

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br/>           Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>           Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
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1. The response of the applicant has been read and given careful consideration, responses appear after the first rejection to which they are directed. The examiner has changed art unit designation to AU 1722.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 15 are under 35 U.S.C. 102(b) as being fully anticipated by Yamazaki JP 03-058077

Yamazaki JP 03-058077 (with notations from oral translation) teaches the articles of figure 11B and 7B which are copy molds. The process of forming the articles of figure 7B is the recording of a holographic image using a grating master through a mask, followed by development in the resist to form the articles of figure 6, which includes the text shown in figure 5B., this is overcoated with Ni (layer 71) which is then peeled from the resist master and used to form the copy mold by electrodeposition (page 4/right lower column, first line and page 3/upper

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right column to page 4/upper left column)). The examples with respect to figure 11A uses sandblasting of the master for the patterning. (figure 10 and text on page 4). The embodiment of figures 12, 13A and 13B coats an ink composition on the grating and then forms an (electroformed) embossing master from this.

The process of figures 12, 13A and 13B meets the limitation of the methods claims and claim 1. Even of the thickness of the final embossing master is thicker than the thickness of the ink layer, the intermediate product inherently meets the limitations as there would be openings in the electroformed shim corresponding to the "DNP" lettering. The "DNP" is held to identify the metallic plate as a product from Dainippon Printing.

The applicant has argued that the term "platelet" require the claimed metal identification means to be minute fragment like structure or a small article. The examiner can agree that the **platelet** language indicates a diminutive article, but given the size the type in the figure and common type holds that the articles illustrated in figure 5b is within any size limits imposed by the "platelet" language. The applicant is free to add a limitation, such as the sizes disclosed on page 5 of the instant specification (WO 2005/078530) to limit the structures to minute structures which might not be able to be formed using screen printing or the like as argued. Currently the claims are not limited to such articles, as the specification on page 5 describes the formation of the shield using printing methods, so the platelets claimed are sized so that they could be made using these techniques, contrary to the argued position.

The position of the examiner is that the embodiment of figures 12,13a and 13b, meet the claims, after the ink (133) has been applied to the diffractive master surface (131), the result is subjected to electroforming growth to form a copy which has been modified by the ink layer

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upon it. Initially, the electroformed layer would be grown just on the surface of the master (131) until the thickness exceeds the thickness of the ink layer, after which growth will extend over the ink layer to form a master like that shown in figure 7b. Before the thickness exceeds that of the ink layer, there will be openings in the metal layer of the copy mold corresponding to the ink pattern. The articles claims embrace the platelet still in contact with the master mold.

5. Claims 1-5,9,12,13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horst et al. '234.

Horst et al. '234 teaches a frame for electro plating which includes a glass substrate (110) with a photoresist with gratings (68) formed in it provided upon it and overcoated with a layer of silver (112). There is an electrode means (114) and plastic plating mask (125) provided upon it which has an opening on it which shapes the resultant copy grating. The grating is then electroformed with nickel to a thickness of 4 mils (101.6 microns) and later separated from the frame means, the photoresist and the silver layer. (7/18-9/4).

Horst et al. '234 discloses the claimed invention except for a very minute size or the provision of holes. It would have been an obvious matter of design choice to reduce the size of the disclosed hologram and stamper for making it, since such a modification would have involved a mere change in the size of a component. A change of size is generally recognized as being within the ordinary level of skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). Similarly, the shape is a matter of design choice available to one skilled in the art.

MPEP 2144.04

IV. CHANGES IN SIZE, SHAPE, OR SEQUENCE OF ADDING

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#### INGREDIENTS

##### A. Changes in Size/Proportion

In re Rose , 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package “of appreciable size and weight requiring handling by a lift truck” where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) (“mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled.” 531 F.2d at 1053, 189 USPQ at 148.).

In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

##### B. Changes in Shape

In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

6. Claims 1-6,8,9,11-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. ‘660, Mallik '319 and Schaefer et al. 638.

Gale et al. ‘660 teaches the formation of the original grating, coating this with a photoresist, exposure and development to expose a portion of the surface and then either electroplating (figure 1) or etching (figure 2) to form a raised portion or a depression.

Schaefer et al. 638 teaches the formation of a resist master in a photoresist, the growth of a metal shim or mother shim by silvering the resist, and electroforming Ni over the resist and peeling this from the resist surface. Daughter shims can then be formed from mother shim by electroforming. [0035-0038]

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Mallik '319 teaches for the formation of gratings with projections, the metal master is formed with holes punched out of them. (figure 2 and text 4/58-5/14) The projection spacers can be in the opposing substrate as well (figure 3)

It would have been obvious to one skilled in the art to modify the process of figure figures 12, 13A and 13B of over Yamazaki JP 03-058077, by then electrolytically duplicating the modified grating as taught by Schaefer et al. 638 and growing the shim only to the thickness of the ink (or photoresist as with Gale et al. '660) and then peeling it, based upon the teachings of the formation of masters with holes punched in them by Mallik '319 which forms the holograms with holes in them without a separate punching step with a reasonable expectation of success based upon electrolytic growth upon gratings being known in the art as evidenced by Gale et al. '660. The shim produced meets the limitations of claims 1-4. Further, as discussed above, the choices of the shape and size arte considered design choices open to one skilled in the art.

No further arguments are presented as at the platelet argument has been addressed above.

7. Claims 1-9,11-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. '660, Mallik '319 and Schaefer et al. 638, further in view of Folger et al. '978

Folger et al. '978 teach making holographic stampers (3/31-52 and examples). Example II takes the nickel master of example 1 after peeling from the resist, the silver layer is treated with a potassium dichromate solution as a release agent (11/56-75). The process is also described with a cleaning step (8/36-75)

It would have been obvious to one skilled in the art to modify the processes rendered obvious by the combination of Yamazaki JP 03-058077, Gale et al. '660, Mallik '319 and

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Schaefer et al. 638 by cleaning and treating the master with potassium dichromate to passivate the surface as this is old and well known in the art to prevent bonding at the metal surfaces as evidenced by Folger et al. '978.

No further arguments are presented as at the platelet argument has been addressed above.

8. Claims 1-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. '660, Mallik '319, Schaefer et al. 638 and Folger et al. '978, further in view of Sakurai et al. JP 05-016152.

Sakurai et al. JP 05-016152 (machine translation attached) teaches the cleaning and drying of a stamper using ultrarefined/ultrapure water and ultrasonic treatment. (abstract)

It would have been obvious to one skilled in the art to modify the processes rendered obvious by the combination of Yamazaki JP 03-058077, Gale et al. '660, Mallik '319, Schaefer et al. 638 and Folger et al. '978 by using known cleaning processes for removing organic materials from stamper surfaces, such as the washing with ultrapure water and ultrasonication taught by Sakurai et al. JP 05-016152, with a reasonable expectation of success based upon this being within the field of forming metal stampers.

No further arguments are presented as at the platelet argument has been addressed above.

9. Claims 1-6, 8, 9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. '660, Mallik '319 and Schaefer et al. 638, further in view of Hirose JP 08-058274.

Hirose JP 08-058274 teaches intaglio printing of ink over holograms (abstract)

It would have been obvious to one skilled in the art to modify the processes rendered obvious by the combination of Yamazaki JP 03-058077, Gale et al. '660, Mallik '319 and



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Schaefer et al. 638 by using other known printing methods for providing ink onto holographic surfaces, such as the intaglio process taught by Hirose JP 08-058274, in place of the silk screen process used in the figures, with a reasonable expectation of success based upon the evidenced equivalent functionality.

No further arguments are presented as at the platelet argument has been addressed above.

10. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang WO 89/01016, in view of Faris '001, Steenblik et al. '320 and Kaule et al. '232.

Yang WO 89/01016 teaches an Al disk with a diameter of 17.5 microns and a thickness of 8 microns which is embossed on both sides with 2.5 micron deep grating structures and the result is useful for forming diffractive pigments for paints and the like (see pages 1,2 and abstract). The use of metals such as Al, Sn or Sb is disclosed (page 2).

Faris '001 teaches the formation of aluminum from which the shapes are cut out and shaped. (7/25-27). The patterned platelets may include diffraction patterns. (7/20-24). The use of various masking techniques to form notches, apertures, or markings on their surface is disclosed (7/55-67). Shapes disclosed include geometric shapes (figures 2A-2c) and other shapes and holes (3a-3c)

Steenblik et al. '320 teaches taggants with diffractive microstructures. (3/21-24 and 6/5-20). The shapes of the taggants can be geometric or symbolic as shown in figures 1a and 1b.

Kaule et al. '232 teaches a security thread having a holographic text "GD" in it (figure 3 and text at 4/22-33).

It would have been obvious to one of ordinary skill in the art to modify the holographic pigment of Yang WO 89/01016 by forming it into symbol/character shapes, such as those

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disclosed by Faris '001 and Steenblik et al. '320 with a reasonable expectation of forming useful pigments/taggants, noting that a circle is one of the shapes disclosed and there is functional equivalence established and using a holographic text on the pigments, as taught by Kaule et al. '232 for security purposes or to identify the manufacturer.

The applicant argues that the shape limitation is not taught. First the examiner holds that any geometric shape meets the limitations of claims and so the circular shape of YAN or those disclosed by Faris meet this limitation. The circle also is the external shape of the letter "o".

Further as discussed above with respect to

B. Changes in Shape

*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

changes in shape represent obvious design choices available to one of ordinary skill in the art.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In*

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*re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-4 and 15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-46 of copending Application No. 12/439638 (US 2010/0110514). Although the conflicting claims are not identical, they are not patentably distinct from each other because the article including the claimed metal platelets renders the claimed platelets themselves obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The applicant has not addressed this rejection.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kelly Cynthia can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Martin J Angebranndt  
Primary Examiner  
Art Unit 1795

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/Martin J Angebranndt/

Primary Examiner, Art Unit 1722

July 5, 2011